

SUBCHAPTER D : STANDARDS FOR WATER SUPPLY CONNECTIONS

§344.70. Local Regulation.

Where any city, town, county, special purpose district, other political subdivision of the state, or public water supplier requires licensed irrigators or licensed installers to comply with reasonable inspection requirements, ordinances or regulations designed to protect the public water supply, any of which relates to work performed or to be performed within such political subdivision's territory by licensed irrigators or licensed installers, a licensed irrigator or licensed installer must comply with such requirements, ordinances, and regulations.

Adopted May 29, 1996

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§344.71. Local Inspection.

Any city, town, county, special purpose district, other political subdivision of the state, or public water supplier may be responsible for inspection of connections to its public water supply system up to and including the backflow prevention device. Water on the discharge side of the backflow prevention device is nonpotable and the portion of an irrigation system on the discharge side of the backflow prevention device is not required to be inspected by a city, town, county, special purpose district, other political subdivision of the state, or public water supplier.

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§344.72. Water Conservation.

It is the policy of the commission that irrigation systems be designed, installed, maintained, repaired, and serviced in a manner that will promote water conservation as defined in §344.1 of this title (relating to Definitions).

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§344.73. Absence of Local Regulation-Backflow Prevention Devices.

Where a licensed irrigator's or a licensed installer's connection of an irrigation system to a public or a private potable water supply is not subject to any inspection requirement, ordinance, or regulation of any city, town, county, special purpose district, other political subdivision of the state, or public water supplier, the licensed irrigator or licensed installer making such connection must install one of the following devices:

(1) Atmospheric vacuum breakers. Atmospheric vacuum breakers are designed to prevent only back-siphonage. Therefore, atmospheric vacuum breakers must not be used in any irrigation systems where back-pressure may occur. There cannot be any shutoff valves downstream from an atmospheric vacuum breaker. Where atmospheric vacuum breakers may be used, they must be installed at least six (6) inches above any downstream piping and the highest downstream opening.

Where local topography effectively prohibits such installation, the executive director shall be consulted for alternative acceptable installation criteria. Such alternative criteria must provide equivalent protection to the potable water supply. In addition, continuous pressure on the supply side of an atmospheric vacuum breaker is prohibited. A separate atmospheric vacuum breaker must be installed on the discharge side of each water control valve, between the valve and all of the sprinkler heads which the valve controls.

(2) Pressure-type vacuum breakers. Pressure-type vacuum breakers are designed to prevent back siphonage and can operate under continuous pressure. Where pressure vacuum breakers may be used, they must be installed at least twelve (12) inches above any downstream piping and the highest downstream opening. Where local topography effectively prohibits such installation, the executive director shall be consulted for alternative acceptable installation criteria. Such alternative criteria must provide equivalent protection to the potable water supply.

(3) Double check assembly backflow preventors. Double check assembly backflow preventors are designed to prevent back pressure and back siphonage of water not containing any toxic substance. They may be used where water supply pressure and back pressure on the backflow prevention device may continuously exist. If a double check valve assembly is installed below grade, there must remain adequate space for testing and repair of the device. Test cocks must be of non-ferrous material.

(4) Reduced pressure principle devices. Reduced pressure principle devices are designed for water containing toxic or non-toxic substances and for back pressure and back siphonage. They must be installed above ground in a location so as to insure that the device will not be submerged during operation. In addition, adequate provisions must be made for any water which may be discharged through the device's relief valve.

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§344.75. Required Backflow Prevention Devices.

(a) An irrigation system that does not have associated with it any type of injection device and that is connected or capable of being connected only to a single source of water presents a low potential for contamination of the water supply and is, therefore, considered to be a "low hazard" installation. Such an irrigation system must be connected to the water supply through a double check assembly backflow preventor, an appropriate type of vacuum breaker, or other industry-approved "low hazard" backflow prevention device.

(b) An irrigation system with any kind of injection device associated with it has a potential for introducing toxic substances into the water supply and is, therefore, considered to be a "high hazard" installation. Such an irrigation system must not be connected to any water supply except through an industry-approved "high hazard" backflow prevention device, such as an appropriate pressure-type backflow preventor or reduced pressure principle backflow prevention device.

(c) If an irrigation system has more than one water supply source, with one or more supplies being potable water and the other supply or supplies being nonpotable water, the irrigation system must

be connected to each water supply only through an industry-approved "high hazard" backflow prevention device.

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§344.77. Minimum Standards for Irrigators/Installers.

(a) Minimum standards for spacing.

(1) Irrigation systems using spray or rotary heads must be designed and installed not to exceed the manufacturer's maximum recommended head spacing for a specific nozzle operating at a specific pressure.

(2) Irrigation systems using spray or rotary heads with no recommended spacing provided by the manufacturer must be designed and installed in conformance with the average spacing specifications provided by a minimum of two other manufacturers of like equipment for the same size nozzle and the same pressure.

(3) Irrigation systems not using spray or rotary heads must be installed according to the manufacturer's recommended installation specifications.

(b) Minimum standards for water pressure. Irrigation systems using spray or rotary heads must be designed and installed according to the minimum head pressure required by the manufacturer for the nozzle and head spacing used.

(c) Minimum standards for wind derating.

(1) Irrigation systems using spray or rotary heads must be designed and installed with the head spacing derated according to the manufacturer's recommendation for the average nighttime wind speed.

(2) Irrigation systems using spray or rotary heads with no manufacturer recommended spacing deration provided must be designed and installed in conformance with the average spacing wind derating information provided by two other manufacturers of like equipment for that size nozzle and pressure.

(d) Minimum standards for precipitation rate.

(1) Landscape irrigation systems using spray or rotary heads that are installed in precipitation zone #1, as defined in §344.1 of this title (relating to Definitions), must be designed and/or installed to provide a minimum precipitation rate of .25 inches per hour for every hour that the landscape irrigation system is in operation.

(2) Landscape irrigation systems using spray or rotary heads that are installed in precipitation zone #2, as defined in §344.1 of this title (relating to Definitions), must be designed and/or

installed to provide a minimum precipitation rate of .275 inches per hour for every hour that the landscape irrigation system is in operation.

(3) Landscape irrigation systems using spray or rotary heads that are installed in precipitation zone #3, as defined in §344.1 of this title (relating to Definitions), must be designed and/or installed to provide a minimum precipitation rate of .30 inches per hour for every hour that the landscape irrigation system is in operation.

(4) Landscape irrigation systems using spray or rotary heads that are installed in precipitation zone #4, as defined in §344.1 of this title (relating to Definitions), must be designed and/or installed to provide a minimum precipitation rate of .325 inches per hour for every hour that the landscape irrigation system is in operation.

(e) Minimum standards for depth coverage of piping. Irrigation systems using spray or rotary heads must be designed and/or installed according to the manufacturer recommended specifications for depth coverage of piping, unless one of the following circumstances is encountered.

(1) If the manufacturer has no recommended specifications for depth coverage of piping, the irrigation system must be designed and/or installed to provide a minimum of six inches of coverage over piping.

(2) If utilities, structures, or tree roots are encountered, the irrigation system must be designed and/or installed to provide a minimum of two inches of coverage over piping.

(f) Minimum standards for wiring irrigation systems.

(1) The wiring used in an irrigation system that connects section valves to controllers must be Underwriters Laboratories listed for direct underground burial.

(2) The wiring used in an irrigation system that connects section valves to controllers must be sized according to the manufacturer's recommendation.

(3) Direct burial wire splices used in an irrigation system must be waterproof as per manufacturer recommendation.

(g) Water conservation devices. The installer should discuss with the purchaser of an irrigation system, including drip irrigation, water conservation devices and irrigation scheduling as a component of the design and installation of the irrigation system. All such components of an irrigation system shall be installed following the manufacturer's recommended practices for the specific types of equipment.

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Repeal of: §§344.141, 344.144, 344.147, 344.150, 344.153, 344.156, 344.159, 344.162

New: §§344.70-344.73, 344.75, 344.77

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